BIOCHEMISTRY

Volume 55, Numbers 1-12, 1990

(A translation of *Biokhimiya*)

Engl./Russ.

Volume 55, Number 1, Part 1, January, 1990

Enzymes of the Concluding Step of Proteolysis of the Main Storage Protein of Buckwheat Seeds - Ya. E. Dunaevskii and M. A. Belozerskii 1 3

Calcuim Transport in Rat Liver Endoplasmic Reticulum During Activation of Lipid Peroxidation - Yu. I. Gubskii, M. D. Kurskii, O. V. Zadorina, A. N. Fedorov, T. S. Bryuzgina, and N. N. Yurzhenko 8 12

Influence of Calmodulin and Chlorpromazine on the Activity of Phospholipases A_2 from Various Sources - N. N. Azizova, U. Z. Muratova, A. I. Gagel'gans, and T. S. Saatov 17 23

Comparison of the Inducing Effect of Triphenyldioxane, Bis-(dichloropyridyloxy)benzene, and Phenobarbital on Liver Monooxygenase - V. M. Mishin, N. I. Gutkina, V. V. Lyakhovich, L. N. Pospelova, and V. V. Chistyakov 21 29

Oxygenase Activity of Cytochrome P-450, Reduced Electrochemically in the Presence of Methylviologen - V. A. Remizov, A. I. Archakov, A. V. Karyakin, and N. A. Byzova .. 27 37

Isolation and Characterization of Hexosaminidase A and the Activating Protein form Human Kidney - E. L. Aronovich, V. S. Akhunov, and K. D. Krasnopol'skaya 32 43

Study of the Supplementary Substrate-Binding Site of Glucoamylase. II. Binding of Ligands in the Supplementary Adsorption Site - A. N. Savel'ev, V. R. Sergeev, and L. M. Firsov 39 52

Tissue-Specific Hormonal Regulation of the Content of Rat Tyrosine Aminotransferase mRNA - V. N. Chesnokov, V. G. Gadzhiev, N. R. Tevs, S. M. Zelenin, G. I. Leont'eva, and N. P. Mertvetsov 44 59

Glycogen Phosphorylase from Human Leukocytes: Isolation and Kinetic Properties - O. V. Lebedeva, I. G. Grumkina, N. N. Ugarova, I. F. Chernyad'eva, V. A. Amelyushkina, and V. N. Titov 49 65

ΔpH-Induced Ca^{2+} Transport into Smooth-Muscle Plasma Membrane Vesicles - S. A. Kosterin, V. P. Fomin, I. B. Chervonenko, and O. P. Shinlova 55 73

Purification and Properties of Two Ferredoxins of the Nitrogen-Fixing Heterocystic Cyanobacterium *Anabaena sphaerica* - A. F. Yakunin, Khai Chan, T. V. Laurinavichene, and I. N. Gogotov 61 80

Peculiarities of the Kinetics of the Hydrolysis of Phospholipids by Phospholipase C from *Bacillus cereus*. Hydrolysis of Phosphatidylcholine in the Presence of Deoxycholate - M. V. Voronin, A. S. Selishcheva, I. A. Vasilenko, and V. I. Shvets 66 87

Volume 55, Number 1, Part 2, January, 1990

Increase in the pH in Lysosomes of Human Fibroblasts during the Accumulation of Nonhydrolyzable Compounds - T. S. Ivleva, T. A. Ogloblina, L. L. Litinskaya, and G. Ya. Vidershain 73 95

Regulation of Proliferative and Protein-Synthesizing Reactions in Human Peripheral Blood Lymphocytes by Glucocorticoids - A. V. Polotskaya and V. V. Adler 78 102

	Engl./Russ.	
Dependence of DNA Replication on the Activity of Neutral Mn^{2+}-Dependent DNase of the Chromatin - V. G. Vinter, A. N. Askarova, N. L. Zotkina, V. V. Kulikov, O. B. Drize, and M. A. Shlyankevich	83	109
Relationship between the Energy State of the Myocardium and the Release of Products of Anaerobic Metabolism from It - O. I. Pisarenko, I. M. Studieva, V. S. Shul'zhenko, V. N. Khlopkov, I. D. Novikov, and V. I. Kapel'ko	87	114
The Role of Heme in the Formation of the Native Structure of Cytochrome P-450 LM_2 - V. Yu. Uvarov, V. E. Tret'yakov, G. P. Kuznetsova, and A. I. Archakov	96	126
Dynamic Behavior of Apoproteins of Human Blood Plasma Very-Low-Density Lipproteins and Regulation of the Process of Lipolysis - A. D. Dergunov, V. V. Shuvaev, and N. V. Perova	103	134
Interrelationship of the Membrane and Soluble Forms of Dopamine β-Monooxygenase - K. A. Markosyan, N. A. Paityan, and R. M. Nalbandyan	113	147
Investigation of the Structural Organization of Oligomers of Cytochrome P-450 with the Use of the Immobilized Isoform LM 2 - K. N. Myasoedova and P. Berndt	119	155
Tyrosine and Methionine Metabolism in Various States of Melaninogenesis - Kh. Kurbanov and N. A. Spiridonova	127	165
Isolation and Properties of Rabbit Liver Triglyceride Lipase - N. G. Nikul'cheva, I. B. Soliternova, and L. A. Eliseeva	133	173
Quantitative Composition of Components of the Phosphoinositide Cycle and Uptake of ^{45}Ca by the Squid Axon at Rest and during Excitation - V. V. Revin, V. A. Trofimov, and S. N. Orlov	139	181

Volume 55, Number 2, Part 1, February, 1990

Activation of Complex I in the Oxidation of NADH and in $\Delta\mu_H$+-Dependent Reduction of NAD^+ by Succinate - A. B. Kotlyar	143	195
Influence of the Tonicity of the Medium on the Respiration Rate and Oxidative Phosphorylation in Liver Mitochondria of Active and Hibernating Ground Squirrels - N. N. Brustovetskii, Z. G. Amerkhanov, E. V. Grishina, and E. I. Maevskii	148	201
Phosphohydrolase Activities of Vacuoles of *Saccharomyces carlsbergensis* Yeast Cells - L. P. Lichko and L. A. Okorokov	154	210
Dissociation of Alfalfa Ribulose-1,5-Diphosphate Carboxylase Under Alkaline Conditions - A. A. Soshinskii, Yu. A. Antonov, and V. B. Tolstoguzov	160	218
The Role of the Inner Membrane in cAMP-Dependent Activation of Mitochondrial Enzymes - A. E. Medvedev, L. V. Trufanova, A. V. Golubenko, and V. I. Kulinskii	165	225
The Significane of Thiols in the Manifestation of the Catalytic Activity of $NADP^+$-Malic Enzyme from Corn Leaves (*Zea mays*) - L. A. Oparina	170	232
Effects of Trypsin on Particles Enriched with Photosystem II in the Aggregated State - A. A. Moskalenko, Yu. E. Erokhin, and N. Yu. Kuznetsova	176	240
Three-Dimensional Structure of the Molecule of Sei Whale Somatotropin Lipotropic Acton - K. D. Mzareulov	181	247
Amino Acid Regulation of the Activity of Molecular Forms of Glutamine Synthetase of *Ankistrodesmus braunii* - A. S. Rasulov, Z. S. Shakirov, Z. G. Evstigneeva, and V. L. Kretovich	188	256
Localization of Cytochrome b_{558} in the Respiratory Chain of the Bacterium *Micrococcus luteus* - T. V. Sheiko, M. A. Lukoyanova, A. S. Kaprel'yants, V. Yu. Artsatbanov, and D. N. Ostrovskii	193	263
Influence of Holotoxin A_1 on Ca^{2+} Transport Across Lipid Models of Biological Membranes - D. L. Aminin, A. V. Lebedev, and D. O. Levitskii	198	270

Engl./Russ.

Components of the Human Complement System. Testing and Isolation of C3 and C5 - A. V. Kosyak, S. A. Shukun, T. N. Poddubkova, V. P. Chikh, and V. I. Surovtsev 202 276

Volume 55, Number 2, Part 2, February, 1990

Effects of Phospholipases on the Bioluminescent Activity of Firefly Luciferase and Bacterial Luciferase - V. M. Ganshin, A. D. Ismailov, and V. S. Danilov 211 285

Catalytic Properties and Stability of Catalase in Reversed Michelles of Areosol OT in Octane - V. D. Artemchik, A. N. Eremin, and D. I. Metelitsa 217 293

Purification and Certain Properties of β-Glucosidases Encoded by the BGL Gene of *Clostridium thermocellum* and Its 3'-Deleton Mutant - I. A. Kataeva, N. P. Golovchenko, Ts. D. Dzhavakhishvili, T. V. Tsoi, A. M. Boronin, and V. K. Akimenko 221 299

Estimation of the Catalytic Activity of Multiple Forms of Cytochrome P-450 in Liver Microsomes of Wistar Rats According to the Androstenedione Metabolism - O. G. Khatsenko, L. F. Gulyaeva, V. M. Mishin, and V. V. Lyakhovich 228 308

Laccase from the Basidial Fungus *Cerrena maxima*. Some Properties and the Kinetic Mechanism of Its Action - A. L. Gindilis, Yu. A. Baranov, E. O. Zhazhina, V. P. Gavrilova, V. V. Verzilov, and A. I. Yaropolov 233 315

Isolation and Properties of Fumarase from the *Pichia membranaefaciens* - Ya. S. Keruchenko and K. L. Gladilin 239 323

Affinity Chromatography of Thyroxin-Binding Proteins of Human Blood Serum - O. V. Sviridov, M. N. Ermolenko, E. S. Pyshko, and T. V. Karpova 244 329

Peptide Synthesis Catalyzed by Proteases. Influence of Temperature on the Kinetics of Acyl Transfer Catalyzed by Papain - M. Yu. Gololobov, U. Schellenberger, F. Schellenberger, H.-D. Jakubke, and V. K. Švedas 251 338

Influence of Khellin and Timefurone on the Secretion and Catabolism of Lipoproteins by Cultured Human and Rabbit Hepatocytes - S. A. Volgushev, V. A. Kosykh, E. A. Podrez, D. K. Novikov, I. V. Fuki, R. S. Karpov, and V. S. Repin 257 346

Study of the pH Dependence of the Kinetic Parameters of the Functioning of Pyruvate Kinase from Bovine Adrenal Cortex - V. V. Vinogradov, Yu. V. Yarotskii, I. I. Stepuro, and I. B. Zavodnik 262 352

Monoclonal Antibodies to Ceruloplasmin and Their Use for the Enzyme Immunoassay of This Protein - T. B. Megrabyan, Z. B. Megrabyan, E. V. Sidorova, and R. M. Nalbandyan 268 361

Study of the Nature of the Protein Ligands of Clusters of the Molybdenum and Iron-Containing Components of Nitrogenase by the ESR Method - A. P. Sadkov, A. V. Kulikov, G. I. Likhtenshtein, L. A. Levchenko, and T. S. Pivovarova 274 368

Purification and Properties of the Hydrogenase of the Green Nonsulfur Bacterium *Chloroflexus aurantiacus* - L. T. Serebryakova, N. A. Zorin, and I. N. Gogotov 277 372

Volume 55, Number 3, Part 1, March, 1990

The Electrogenic Step Associated with the Formation of a Semiquinone of the Secondary Acceptor of the Photosynthetic Reaction Center - M. I. Verkhovskii, L. A. Drachev, M. D. Mamedov, A. Ya. Mulkidzhanyan, A. Yu. Semenov, and V. P. Shinkarev 285 387

Isolation and Characteriztion of the Properties of Two Multiple Forms I and II of Acid Phosphatase from the Fungus *Penicillium brevicompactum* - V. I. Krupyanko, A. I. Kudryavtseva, A. G. Trushkina, V. A. Ezhov, and V. M. Nikolaeva 291 395

	Engl.	Russ.
Components of the System of Human Complement. Testing and Isolation of C4 - V. P. Chikh, A. V. Kosyak, S. A. Shukun, and V. I. Surovtsev	298	404
Immunologic Characterization of Glutamate Dehydrogenases of Single-Celled Green Algae - L. P. Loseva, V. R. Shatilov, and V. L. Kretovich	301	408
Influence of Herbicides on the Structuro-Functional State of the Chloroplasts - L. A. Levchenko, A. P. Sadkov, V. V. Trokhimets, T. S. Pivovarova, I. I. Kovalenko, and G. N. Bogdanov	307	416
Extracellular Lignin-Decomposing Enzymes of the Fungus Panus tigrinus - L. A. Leont'evskii and L. A. Golovleva	312	423
Changes in Cell Membrane Proteins in the Process of Carcinogenesis Induced by N-Nitrosodiethylamine - N. K. Berdinskikh, D. R. Korol', and V. I. Livshits	319	432
Comparative Investigation of the Composition of Glycosaminoglycans in the Plasma Membranes of Normal and Transformed Mouse Liver Cells - V. I. Rykova, S. A. Kropotova, V. I. Kaledin, and L. A. Semenova	324	439
An Electrostatic Method of Determining Phospholipase A Activity - V. V. Chernyi, V. M. Mirskin, V. S. Sokolov, and V. S. Markin	329	445
Influence of Calcium Channel Blockers and an Activator on Electron Transport in Pea Chloroplasts; Participation of Calcium in the Functioning of Photosystem II - B. K. Semin, I. I. Ivanov, and A. B. Rubin	334	451
Isolation and Characterization of Protein Bodies from Cotyledons of Resting Buckwheat Seeds - É. N. Élpidina, Ya. E. Dunaevskii, and M. A. Belozerskii	339	458
Kinetic Cooperativeness in the Inhibition of the Activity of Protein Kinase with Diene Conjugates form Phospholipids and Arachidonic Acid in Vitro - E. L. Mal'tseva, N. V. Kurnakova, E. B. Burlakova, and N. P. Pal'mina	348	471

Volume 55, Number 3, Part 2, April, 1990

	Engl.	Russ.
Phospholipids of the Thylakoid Membranes of Chloroplasts Devoid of Photosystem II - V. M. Trusova, V. V. Mezentsev, S. M. Ksenzenko, A. N. Tikhonov, and M. I. Molchanov	355	480
Two-Dimensional Map of the Proteins of the Left Ventricles of the Human Heart - E. V. Pulyaeva, L. I. Kovalev, M. N. Tsvetkova, S. S. Shishkin, and N. I. Boldyrev	362	489
Participation of Selenium in the Regulation of Peroxidation of the Lipids of Biomembranes and the Glutathione Peroxidase Activity - T. M. Guseinov, É. M. Nasibov, and A. I. Dzhafarov	370	499
N-Terminal Sequences of ω-Gliadins of *Aegilops longissima* on the Origin of the Genomes of Polyploid Wheats - T. I. Odintsova and Ts. A. Egorov	377	509
Incorporation of Exogenous Precursor into the Nucleic Acids of the Extremely Thermophilic Acidophilic Archaebacterium *Sulfolobus acidocaldarius* - G. D. Muskhelishvili, M. V. Karseladze, and D. A. Prangishvili	383	517
Separation and Comparative Characterization of Subunits of Phenylalanyl-tRNA Synthetases from *Escherichia coli* MRE-600 and *Thermus Thermophilus* HB8 - E. V. Bobkova, A. D. Vol'fson, V. N. Ankilova, and O. I. Lavrik	389	525
Interaction of Prostaglandins and Fatty Acids with Native and Acetaldehyde-Alkylated Proteins - V. U. Buko, I. B. Zavodnik, and E. A. Lapshina	396	534
Active Na^+-Dependent Transport of Ca^{2+} into the Fractions of Smooth-Muscle Sarcolemma Vesicles - N. F. Burchinskaya, S. G. Shlykov, and S. A. Kosterin	401	541
Does Malonate Participate in Sterol Synthesis? - A. N. Klimov, L. E. Vasil'eva, T. A. Klimova, and É. B. Dizhe	407	549

	Engl.	Russ.
cAMP-Independent Protein Kinase from the Amphibian Eye Lens: Identification, Analysis of Distribution in the Organ, and Substrates of Phosphorylation - S. M. Elizarov and V. N. Simirskii	411	554
Biosynthesis of Furostanol Glycosides in a Suspension Culture of *Dioscorea deltoidea* Wall Cells from [2-^{14}C]Acetate - I. S. Vail'eva, V. A. Paseshnichenko, V. V. Urmantseva, A. M. Nosov, É. G. Chkheidze, and A. A. Bezzubov	418	564

Volume 55, Number 4, Part 1, April, 1990

pH-Dependent Changes in the Structure and RNA-Binding Activity of Casein Kinase Type 2 from Amphibian Oocytes - K. V. Kandrov, D. V. Kapkov, and A. S. Stepanov	423	579
Recombinant RNA-Dependent DNA Polymerase RSV. Isolation and General Characterization - A. P. Chernov, A. A. Mel'nikov, V. V. Shmatchenko, and I. Fodor	429	586
Complexes of Phorbol Tumor Promoters with Protein Kinase C - O. V. Kozhemyakina and L. S. Yaguzhinskii	436	595
Ratio of the Nitrogen-Fixing and Acetylene-Reducing Activities in a Nitrogenase Complex - A. P. Sadkov and G. I. Likhtenshtein	446	608
Some Physicochemical Properties and the Substrate Specificity of Endo-1,4-β-glucanase II of *Geotrichum candidum* - N. A. Rodionova, N. V. Yasil'eva, L. I. Martinovich, and A. M. Bezborodov	450	613
Isolation and Characterization of Casein Kinase Type II from Amphibian Eye Lenses - S. M. Elizarov and V. N. Simirskii	460	625
Molecular Forms of Glutamate Dehydrogenase in Glutamine Synthetase of the Symbiotic Nitrogen-Fixing Association *Azolla*–Anabaena - A. V. Sof'in, T. G. Didenko, V. R. Shatilov, and V. L. Kretovich	467	634
Effects of Various Forms of Thrombin on Nonspecific High-Molecular-Weight Substrates - A. A. Sereiskaya, I. V. Pekhnik, and T. V. Osadchuk	475	645
The Absence of Arachidonic Acid in Germinating Poplar Buds (*Populus balsamifera* L.) - A. N. Grechkin, O. S. Korolev, and R. A. Kuramshin	481	653
Influence of Cu^{2+} and Zn^{2+} Cations and Biogenic Polyamines on the Poly(ADP-Ribose) Polymerase Activity of Rat Brain Nuclei - T. M. Zaalishvili, N. Sh. Dzhaparidze, D. Sh. Sabelashvili, and R. D. Michilashvili	485	659

Volume 55, Number 4, Part 2, April, 1990

Chemical Modification of Cholesterol-Hydroxylating Cytochrome P-450 of Adrenal Cortex Mitochondria with Diethyl Pyrocarbonate - I. A. Pikuleva, S. A. Usanov, and V. L. Chashchin	489	665
Kinetics of the Hydrolysis of L-γ-Glu-pNA by Destabilase, an Enzyme from the Leech *Hirudo medicinalis* - I. P. Baskova, G. I. Nikonov, L. L. Zavalova, and N. I. Larionova	495	674
Kinetic Properties of Sorbitol Dehydrogenase from the Cytoplasm of Calf Liver Cells - V. E. Sudovtsov and T. Yu. Zharmukhamedova	500	680
Interaction of Plantacyanin with the Ferredoxin:NADP Reductase System of the Chloroplasts - A. M. Mutushkin, L. E. Mazhorova, A. M. Nersisyan, and R. M. Nalbandyan	506	687
The Substrate Specificity of Glycogen Synthase of Rabbit Skeletal Muscles - S. Yu. Sundukov and G. A. Solov'eva	511	693
pH Dependence of the Dark Equilibrium Between 13-cis- and trans-Bacteriorhodopsins of Purple Membranes - A. D. Kaulen and N. V. Postanogova	516	700

	Engl.	Russ.
Regulation of the Acitivity of 5-Lipoxygenase from Potato Tubers Under the Action of Temperature - I. O. Lagutina, G. F. Sud'ina, and S. D. Varfolomeev	520	705
Adenosine Triphosphatases of the Plasma Membranes of Bovine Intestinal Epithelial Cells - P. V. Usatyuk, N. I. Tsvilikhovskii, and D. A. Mel'nichuk	526	712
Structure of the Chromatin of Transcriptionally Active and Inactive Repetitive Nucleotide Sequences - A. N. Kukushkin and V. A. Pospelov	531	718
Interaction of Triiodothyronine Hormone-Receptor Complexes with DNA and RNA - A. T. Adylova	535	724
Respiration-Dependent Swelling of Sugarbeet Root Mitochrondria in KCl - A. G. Shugaev	541	731
Detection of a Metalloproteinase and Its Inhibitor in the Protein Bodies of Buckwheat Seeds - E. N. Élpidina, N. E. Voskoboinikova, M. A. Belozerskii, and Ya. E. Dunaevskii	545	737
Isolation, Identification, and Electrophoretic Properties of DNA Excreted by Human Lymphocytes - I. S. Yaneva, N. A. Fedorov, T. V. Borobkova, and M. G. Sevast'yanova	552	745
Interaction of Calcium Agonists and Antagonists with Ca-Binding Proteins and Their Influence on Cycle Nucleotide Phosphodiesterase - I. A. Feoktistov, G. N. Baldenkov, I. V. Barannik, E. B. Chervyakov, and N. P. Larionov	560	754
BRIEF COMMUNICATIONS		
Detection of the Protein Phenylation Hydroxylase in Human Platelets. Immunochemical Identification - A. V. Zamotrinskii, I. G. Jennings, R. G. H. Cotton, and V. V. Chestkov	565	760

Volume 55, Number 5, Part 1, May, 1990

Hydrolysis of the Isopeptide ε-(γ-Glutamyl)-Lysine by Destabilase from the Medicinal Leech *Hirudo medicinalis* - I. P. Baskova, E. A. Timokhina, G. I. Nikonov, and V. M. Stepanov	571	771
Acid Proteinase and the Multiplicity of Forms of Glucoamylase from *Asp. awamori* - K. N. Neustroev and L. M. Firsov	575	776
The Role of Active Forms of Oxygen in Processes of Platelet Aggregation and Disaggregation - A. B. Samal', S. N. Cherenkevich, and N. F. Khmara	583	786
Influence of Haptoglobin on the Prostaglandin-H Synthetase of Sheep Vesicular Glands - A. T. Murzagalieva, R. U. Beisembaeva, N. D. Igumnova, and A. T. Mevkh	586	791
Binding of Calcium by the Plasma Membrane Fraction of Smooth-Muscle Cells - V. K. Rybal'chenko	590	796
Induction of Protein Synthesis in Mammalian Lymphocytes during Hyperthermia - Kh. A. Ul'masov, S. B. Akopov, and M. D. Khudaiberdyev	594	801
A Rapid Method of Producing Cell Membranes of Platelets for Radioligand and Enzymatic Investigations - V. S. Gurevich, A. D. Skholl'-Engberts, and Yu. G. Popov	599	808
Phosphorylation of Proteins of the Papillary Zone of the Kidney by Endogenous cAMP-Dependent Protein Kinases - S. G. Dzgoev and L. N. Ivanova	603	814
Effects of Magnesium Ions on the Two-Step Kinetics of Superprecipitation and ATPase of Natural Actomyosin - B. A. Tikunov	609	822
Investigation of the Nucleoside Triphosphate-Binding Site of Phase T7 DNA-Dependent RNA Polymerase Using GTP Analogs - A. Kh. Akbarov, V. L. Tunitskaya, L. A. Baranova, Yu. V. Khropov, M. M. Krasil'nikova, and S. N. Kochetkov	614	829
Composition of Fatty Acids and Sphingosine Bases of Placental Gangliosides - E. V. Kryukova, S. A. Lyubushkina, and É. V. Dyatlovitskaya	620	836
A Metalloproteinase Inhibitor from Dormant Buckwheat Seeds - N. E. Voskoboinikova, Ya. E. Dunaevskii, and M. A. Belozerskii	622	839

	Engl.	Russ.
Investigation of in Vitro Processes of an Artifical Analog of β-Lipotropin - A. P. Kuz'menko, S. A. Fedosov, S. Ya. Golovin, L. V. Mamaev, V. A. Korzhov, A. A. Il'ichev, and S. N. Zagrebel'nyi	629	848
Interaction of Model IgG Complexes with Lectin of the Gastor Plant in Solution According to the Method of Light Scattering - Yu. K. Sykulev, T. V. Eronina, V. A. Aleshkin, and K. K. Ostreiko	635	856

Volume 55, Number 5, Part 2, May, 1990

Cholesterol-Hydroxylating Cytochrome P-450 of Mitochondria of the Bovine Adrenal Cortex and Human Placenta: Immunochemical Properties and Structural Characteristics - S. A. Usanov, A. A. Chernogolov, P. Honkakoski, M. Lang, M. Pasanen, H. Raunio, and O. Pelkonen	643	865
Identification and Purification of GTP-Binding Regulatory Proteins from Pig Heat Plasma Membranes - S. I. Goffenberg, M. P. Panchenko, I. V. Zhuravlev, and V. A. Tkachuk	653	878
Investigation of the Role of the Histidine Residues in the Streptokinase Molecule by Modification with Diethyl Pyrocarbonate - V. N. Nikandrov, O. A. Kazyuchits, and G. S. Yankovskaya	661	888
Kinetic Properties of a New Enzyme System, L-Glutamate: Acceptor: Disulfide-Dithiol:NAD^+-Oxidoreductase Deaminating, and Its Distribution in the Dry Wheat Seed - A. S. Koldasova, V. R. Shatilov, M. K. Gil'manov, G. A. Shalakhmetova, and V. L. Kretovich	669	898
Activation by Calmodulin of ATP-Dependent Transport of Ca^{2+} in the Plasma Membranes of the Myometrium - L. A. Prishchepa, T. P. Kondratyuk, and M. D. Kurskii	675	905
Participation of the Single-Strand DNA-Binding Protein (SSB-Protein) in DNA Replication in Ehrlich Ascites Carcinoma Cells - A. N. Koterov, N. A. Novoradovskaya, and I. V. Filippovich	680	911
Stimulation of the Synthesis of Cholesterol Esters in Macrophages by Lipoproteins from Normal and Atherosclerotic Intima of the Human Aorta - G. B. Men'shikov, V. O. Ivanov, and V. S. Repin	685	917
Expression of the Ceruloplasmin Gene in Various Rat Organs - V. S. Gaitskhoki, O. V. Voronina, V. V. Denezhkina, M. G. Pliss, L. V. Puchkova, A. L. Shvartsman, and S. A. Neifakh	693	927
The Argenine Residue in the Active Site of D-Glyceraldehyde-3-Phosphate Dehydrogenase. Participation in Individual Steps of Catalysis - E. V. Kuz'minskaya, R. A. Asriyants, V. I. Tishkov, and N. K. Nagradova	701	938
The Absence of Gm^6ATC Sequences Containing Methylated Adenine in Chloroplast and Nuclear DNA of Leguminous Plants - B. F. Vanyushin and O. A. Ogarkova	707	946
OBITUARY		
Nataliya Vladimirovna El'tsina (1913-1989)	952	

Volume 55, Number 6, Part 1, June, 1990

Interaction of Sodium Tetraphenylborate with Blood Serum Lipoproteins - V. A. Loginov, E. M. Poteshnykh, and V. N. Malakhov	715	963
Effect of Furosemide on Mg-ATPase from Carp Olfactory Mucosa - S. A. Menzikov and P. A. Gdovskii	720	970

	Engl.	Russ.
Physicochemical Characteristics of the Angiotesin-Conversing Enzyme from Bovine Lungs - O. A. Kost, N. A. Lamzina, T. Z. Sharafutdinov, V. L. Tsuprun, and N. F. Kazanskaya	724	974
Vitamin A and Microsomal Membranes: Influence of Retinol Deficiency on Lipid Microviscosity and Phospholipid Turnover in Rat Liver Microsomes - I. Ya. Kon', A. I. Sokolov, I. Yu. Filatov, A. I. Deev, and M. M. G. Gapparov	730	982
General Principles of the Activation of Mast Cells by Cyclic Analogs of the Major Vasocative Peptides - E. A. Porunkevich, M. P. Ratkevich, G. G. Kublis, F. K. Mutulis, and G. I. Chipens	735	988
Interaction of Coumarin-Hydroxylating Cytochrome P-445-coh of Liver Microsomes of Pyrazole-Treated Mice with Cytochrome b_5 - S. A. Usanov, P. Honkakoski, M. Lang, and O. Hanninen	740	995
pH-Dependent Changes in the Two-Stage Reaction Kinetics of the Superprecipitation of Natural Actomyosin - B. A. Tikunov	750	1008
Macromolecular Spin pH Probes Based on Human Serum Albumin - V. V. Khramtsov, L. M. Vainer, V. A. Rar, T. A. Berezina, V. V. Martin, and L. B. Volodarskii	755	1014
Study of the Substrate Specificity of Rat Liver Acetyl-CoA Carboxylase - V. V. Velikodvorskaya, A. G. Rabinkov, V. M. Kopelevich, É. A. Tolosa, L. N. Bulanova, and V. I. Gunar	758	1018
Phenylalanyl-tRNA Synthetase from Human Placenta: Isolation and Characterization - O. D. Zakharova, Yu. G. Kotenko, and O. I. Lavrik	763	1025
Kinetic Principles of the Influence of GTP on the Properties of Opioid Receptors - O. A. Sklyankina, I. N. Kurochkin, A. D. Varfolomeeva, B. V. Krekhnov, S. V. Zaitsev, and S. D. Varfolomeev	769	1032
The Necessity of Sodium Ions for Generation of a Membrane Potential by Cells of an Alkalotolerant Bacillus in the Presence of Protonophores - M. L. Verkhovskaya, A. L. Semeikina, and V. P. Skulachev	778	1043
The Bioluminescent System of Fireflies. Investigation of the Interaction of the Reaction Product, Oxyluciferin, and Its Analogs with Luciferase by Methods of Fluoroescence Spectroscopy - O. A. Gandel'man, L. Yu. Brovko, N. N. Ugarova, and A. A. Shchegolev	785	1052

Volume 55, Number 6, Part 2, June, 1990

Comparative Study of Bovine Adrenodoxin and Renoredoxin - N. A. Lobanov, T. M. Vlasova, and T. B. Adamovich	791	1059
Isolation and Properties of a Specific Trypsin Inhibitor from Human Seminal Plasma - A. A. Nikolaev and V. S. Karasev	796	1065
PH Dependence of the Hormone-Binding and Enzymatic Activities of Rabbit Liver Estrophilic Hydroxysteroid Dehydrogenase - A. N. Smirnov	802	1073
Synthesis of Phosphocreatine in Myocardial Mitochondria of Hyperthyroid Rats - É. K. Seppet, A. I. Kadaya, A. P. Kallikorm, and V. A. Saks	809	1081
Some Kinetic Properties of β-Glucosidase Cloned from *Clostridium thermocellum* in *E. coli* - I. A. Kataeva, N. P. Golovchenko, and V. K. Akimenko	814	1088
Purification and Certain Properties of Cell Envelope Polyphosphatase of the Yeast *Saccharomyces carlsbergensis* - N. A. Andreeva, L. A. Okorokov, and I. S. Kulaev	819	1094
Effects of Phorbol Esters and Ca^{2+} Ions on the Processes of Autophosphorylation of the Epidermal Growth Factor Receptor in Vivo - A. I. Kharitonenkov and T. V. Bulargina	827	1104
Thiol-Dependent Serine Proteinase of *Streptomyces thermovulgaris* - N. V. Khaidarova, G. N. Rudenskaya, L. P. Revina, V. M. Stepanov, and N. S. Egorov	832	1110

	Engl.	Russ.
Inhibition of Glycogen Synthase I of Rabbit Skeletal Muscles by 1,5-Gluconolactone - S. Yu. Sundukov and G. A. Solov'eva	839	1120
Kinetic Principles and Enantioselectivity of the Action of Penicillin Acylase in the Hydrolysis of N-Phenylacetyl Derivatives of 1-Aminoethylphosphonic Acid and Its Esters - D. A. Mironenko, E. V. Kozlova, V. K. Shvyadas, V. A. Solodenko, T. N. Kasheva, and V. P. Kukhar'	843	1124
Methylation of the EcoRI (GAm^6ATTC) Sequences of Bacterial DNA - A. Yu. Lebenka	849	1132
Probable Epitopes of Adenovirus Capsid Proteins - L. A. Tarasishin and V. A. Dodatko	856	1140
Oxidation of Ceruloplasmin by Hypochlorite. Loss of the Blue Color and Conservation of Oxidase Activity - B. P. Sharonov and N. Yu. Govorova	860	1145

Volume 55, Number 7, Part 1, July, 1990

Biochemistry of Organometallic Compounds - A. D. Ryabov and S. D. Varfolomeev	863	1155
Study of Substrates of ADP-Ribosyl Transferase from Human Erythrocytes - A. Ya. Kots, A. V. Skurat, and T. V. Bulargina	873	1169
Rapidly Dissociating Complexes of Estradiol and Corticosterone with Rat Blood Serum Proteins - A. A. Tinnikov	879	1177
The Role of the Hydroxyl Groups of the Tyrosine Residues of RNA Ligase - V. Sabalyauskene, L. Kiss, and B. Yuodka	883	1182
Mechanism of the Interaction of Peroxidase with p-Phenylenediamine - V. K. Vanag, A. S. Shelyapin, and V. A. Livshits	890	1192
Mechanism of the Interaction between the Photosynthetic Reaction Center and the Cytochrome bc_1 Complex in Nonsulfur Purple Bacteria *Rhodobacter sphaeroides* - M. I. Verkhovskii, N. P. Grishanova, M. D. Mamedov, A. Ya. Mulkidzhanyan, A. Yu. Semenov, and V. P. Shinkarev	898	1202
Metabolism of Diazepam by Multiple Forms of Cytochrome P-450 of Rat Liver Microsomes - A. A. Faibushevich, L. F. Gulyaeva, A. Yu. Grishanova, V. M. Mishin, and V. V. Lyakhovich	904	1210
Linoleate-Hydroxamic Acid: A Suicide Inhibitor of Lipoxygenase - I. A. Butovich, V. P. Bridnya, and V. P. Kukhar'	908	1216
Localization of Antigenic Sites for Monoclonal Antibodies Produced against the α-Subunit of the G_0 Protein from Bovine Brain - A. G. Katrukha, A. V. Bereznikova, N. A. Kochanova, A. B. Gareeva, K. M. Popov, T. V. Bulargina, and E. S. Severin	913	1222
Investigation of the Interaction of the α-Subunit of the GTP-Binding Protein from Bovine Brain, G_0, with the Cytoskeleton - A. V. Bereznikova, A. B. Gareeva, N. A. Kochanova, K. M. Popov, T. V. Bulargina, and E. S. Severin	918	1229
Catalytic Properties of Purified Ca^{2+}, Mg^{2+}-ATPase of Myometrial Sarcolemma - L. A. Lyubakovskaya, N. N. Slinchenko, N. F. Burchinskaya, and M. D. Kurskii	924	1237

Volume 55, Number 7, Part 2, July, 1990

Immunochemical Properties of the Type II Regulatory Subunit of cAMP-Dependent Protein Kinase - I. D. Grozdova, E. V. Nyupenko, E. V. Sveshnikova, and E. S. Severin	931	1244
Influence of Calmodulin Inhibitors and a New Cardiotonic Drug DPI 201-106 on the Formation of Interprotein Bonds in the Troponin Complex of the Heart - I. A. Feoktistov, A. V. Krylatov, and N. P. Larionov	937	1251

	Engl.	Russ.
Isolation of Low-Molecular-Weight Cytoplasmic Regulators from the Rat Liver, Which Induce Electrophoretic Transport of K^+ and Phosphate Ions Through the Inner Mitochondrial Membrane - M. Kh. Gainutdinov, T. N. Zakharova, R. N. Ishmukhamedov, V. V. Konov, and K. S. Safarov	941	1257
DNA-Binding Lipids of the Cells of Eukaryotes (Loach Sperm, Pigeon Erythrocytes) and Prokaryotes (*E. coli* B, Phage T2) - V. A. Struchkov and N. B. Strazhevskaya	948	1266
Influence of the Translation Inhibition Cycloheximide on the Expression of Mammalian Genes - V. N. Chesnokov and N. P. Mertvetsov	955	1276
Some Physicochemical and Kinetic Properties of Metalloproteinase of the Bacteriolytic Preparation Lysoamidase - V. I. Krupyanko, A. I. Severin, A. I. Kudryavtseva, A. Ya. Valiakhmetov, A. G. Kozlovskii, and I. S. Kulaev	957	1279
Interaction of Glycogen Synthase from Rabbit Skeletal Muscles with 1,5-Gluconolactone - S. Yu. Sundukov and G. A. Solov'eva	963	1287
Caldesmon and Myosin Subfragment 1 Have Different Effects on the Structural State of Tropomyosin Modified with 1,5-IAEDANS in Ghost Muscle Fibers - Yu. S. Borovikov, E. Nowak, M. I. Khoroshev, and R. Dabrowska	968	1294
Glutamine Synthetase of the Cell Cytosol of Plant Tissue of Soybean, Alfalfa, and Pea Nodules - V. I. Senichak, M. V. Kaush, S. I. Toma, Z. G. Evstigneeva, and V. L. Kretovich	971	1299
Mechanisms of Photodamage to Structures of the Eye. IV. Change in the Reactivity of SH Groups of Proteins of the Eye Lens Under UV Irradiation - V. V. El'chaninov and I. B. Fedorovich	975	1304
Light Modulation of the Hydrogenase Activity in Photoreduction of Protochlorophyll(IDE) and Biogenesis of Photosystem I in Greening *Chlorella* Mutants - V. A. Boichenko and F. F. Litvin	978	1309
Hydrolysis of the Cell Wall Peptidoglycan of *Micrococcus luteus* BKM B-1314 by Lysoamidase - A. I. Severin, A. Ya. Valiakhmetov, V. Ya. Il'chenko, Z. S. Plotnikova, and I. S. Kulaev	986	1319
Phosphorylation of Tryptophanyl-tRNA Synthetase in Extracts of Bovine Pancreas - T. A. Zargarova, N. M. Aleksandrova, E. L. Palei, and O. O. Favorova	993	1328

Volume 55, Number 8, Part 1, August, 1990

	Engl.	Russ.
An Unusual (ZIGZAG) Temperature Dependence of the Rate of Irreversible Thermal Inactivation of Enzymes - V. A. Shikshnis, N. Z. Galkantaite, N. S. Melik-Nubarov, V. Yu. Levitskii, V. I. Slepnev, and V. V. Mozhaev	1001	1347
Reorganization of Superstructures of Chromatin Under Conditions of Sharp Fluctuations of the Rate of Protein Synthesis - N. A. Shevchenko, P. Ya. Boikov, G. I. Ivanova, and I. N. Todorov	1008	1356
Change in the Level of Tightly Bound Phospholipids of the Mitochondria Under the Influence of Endogenous Factors - N. P. Lopina, T. I. Smirnova, M. A. Pastushenkova, I. V. Paramonova, A. V. Kargapolov, and L. S. Yaguzhinskii	1012	1362
A New Form of Copper-Containing Centers in Human Ceruloplasmin - V. V. Ryl'kov, M. Yu. Taras'ev, and K. A. Moshkov	1016	1367
Internalization and Degradation of Lathrotoxin Bound to Rat Brain Synaptosomes - V. K. Lishko, E. V. Nikolishina, and N. G. Gimmel'reikh	1022	1375
Effects of Estradiol on the Initiation of Phosphoinositide Catabolism in Rat Brain Synaptosomal Membranes - É. S. Gevorkyan and Yu. V. Tadevosyan	1027	1381
A Serine Proteinase from a Higher Basidiomycete of the Genus *Coprinus* - K. A. Shaginyan, I. A. Alekhina, and N. P. Denisova	1032	1387

	Engl.	Russ.
A Zinc-Dependent Angiotensin-converting Enzyme in Reaction with Various Substrates - O. A. Kost, T. Z. Sharafutdinov, and N. F. Kazanskaya	1039	1396
Phospholipids and Glycosphingolipids of Cultured Skin Fibroblasts of Healthy Donors and Patients with Systemic Scleroderma - N. D. Gabriélyan, N. V. Prokazova, A. V. Komleva, L. N. Kashnikova, T. V. Efimova, and A. F. Panasyuk	1043	1402
Angeli Salt as a Producer of Nitrogen Oxide in the Animal Organism - A. F. Vanin, Yu. I. Vedernikov, M. E. Galagan, L. N. Kubrina, Ya. A. Kuzmanis, I. Ya. Kalvin'sh, and P. I. Mordvintsev	1048	1408
pH-Dependent Changes in the Affinity of ATP and ADP for the Tight Nucleotide-Binding Sites of the Chloroplast Coupling Factor CF_1 - A. N. Mal'yan and O. I. Vitseva	1052	1414
Kinetic Analysis of Chains of Coupled Reversible Cyclic Reactions - V. I. Zvalinskii and F. F. Litvin	1058	1421

Volume 55, Number 8, Part 2, August, 1990

Characteristics of Radish Mosaic Virus RNA. Terminal Structures and Translation Products - M. V. Sapotskii and Yu. F. Drygin	1071	1437
The Role of Juvenile Hormone and a Brain Factor in the Regulation of Vitellogenin Biosynthesis in the Locust(*Locusta migratoria*) - A. V. Glinka and E. S. Pshennikova	1007	1445
Ethanol-Metabolizing Enzymes of Human Testes - P. P. Voronov and A. M. Khokha	1082	1451
Stable Dense Nucleotide-Binding Particles in Amphibian Oocytes, Which Cosediment with Free Cytoplasmic Informosomes - K. V. Kandror and A. S. Stepanov	1090	1461
Purification and Some Properties of Rat Liver Pantothenate Kinase - T. I. Khomich, A. G. Moiseenok, and A. I. Voskoboev	1096	1468
N-tris-(β-D-galactopyranosyloxymethyl)glycine Methylamide as an Antigenic Determinant of Neoglycoproteins - T. V. Dudukina, S. A. Nepogod'ev, and D. M. Belen'kii	1101	1474
Kininase of Venom of the Spider *Latrodectus tredecimguttatus*. Characteristics of the Enzyme as a Thiol Endopeptidase That Cleaves the -Pro^7-Phe^8 Bond in Bradykinin - L. G. Makevnina, Z. Golubenko, A. Akhunov, and T. S. Paskhina	1106	1481
Regulation of Gluconeogenesis in the Livers of Vitamin B_1-Deficient Rats - S. S. Maglysh, Z. V. Gorbach, and O. V. Konovalenko	1113	1491
Influence of Caldesmon and Smooth-Muscle Tropomyosin on the Motility of Myosin Heads in Ghost Muscle Fibers - Yu. S. Borovikov, E. Novak, and R. Dabrowska	1119	1498
Peculiarities of the Acitivity of Adenosine Triphosphates in Carp Erythrocytes Treated with Saponin - G. A. Skryabin, V. V. Petrunyaka, S. N. Orlov, S. V. Kotelevtsev, and Yu. P. Kozlov	1122	1503
Influence of Changes in the Lipid Composition of the Membrane on the Functional Acitivity of Platelets - T. M. Ishankhodzhaev, V. T. Bornikov, B. R. Zainutdinov, and T. S. Saatov	1125	1507
Subcellular Organization of Triacylglycerol Biosynthesis in Yeasts - A. P. Belov and G. A. Zinchenko	1130	1513
Investigation of the Isozyme Composition of Hexokinase in Rat Sarcoma M-1 - N. F. Garkusha and N. Yu. Goncharova	1135	1519
Regulation of the Reception of $1,25(OH)_2D_3$ (Calcitriol) by Vitamin B_6 - M. N. Sergeev and V. B. Spirichev	1141	1527

Volume 55, Number 9, Part 1, September, 1990

Cloning and Nucleotide Sequence of the fus Gene Coding for Elongation Factor G of *Thermus thermophilus* HB8 - A. V. Yakhnin, D. P. Vorozheikina, and N. I. Matvienko 1147 1539

Reconstitution of the Cholesterol-Hydroxylating System from Adrenal Cortex Mitochondria by Cytochrome P-450$_{scc}$, Adrenodoxin, and the Redox Mediator Neutral Red - O. L. Gur'ev, S. N. Gilevich, and V. L. Chashchin 1160 1553

The Protective Action of Ceruloplasmin in Lysis of Human Erythrocytes Induced by Iron Ions - E. L. Saenko, O. V. Skorobogat'ko, and A. I. Yaropolov 1168 1563

Comparative Investigation of Phenylalanyl-tRNA Synthetases from *Escherichia coli* and *Thermus thermophilus* by the Method of Tritium Topography - E. V. Bobkova, A. V. Gedrovich, V. N. Ankilova, O. I. Lavrik, L. A. Baratova, and A. V. Shishkov 1174 1570

Lathrotoxin Channels: Permeability for Divalent Cations - V. K. Lishko, E. A. Sichenko, L. G. Storchak, and N. G. Gimmel'reikh 1180 1578

Inhibition of the Casein Kinase Type 2 Activity by the Formation of Complexes with mRNA *in vivo* - K. V. Kandror and A. S. Stepanov 1184 1584

Aldehyde Dehydrogenase of Root Mitochondria of the Mung Bean *Phaseolus aureus* - N. G. Li, A. G. Ponomarev, V. V. Bubyakina, and V. L. Osakovskii 1189 1590

The Adsorption Mechanism of Regulation of Hexokinase Activity in Rat Sarcoma M-1 - N. F. Garkusha and N. Yu. Goncharova 1197 1599

Influence of Ketoconazole, An Inhibitor of Monooxygenase Activity, on the Esterification of Cholesterol in Mouse Peritoneal Macrophages - M. I. Dushkin, E. V. Mandrikova, G. Yu. Lyubimov, N. N. Vol'skii, and A. V. Dolgov 1203 1607

Opposite Control of Oxygen Affinity for Hemoglobin by Donors and Acceptors - B. S. Marinov and R. Kh. Ruzieva 1210 1616

Stimulation of the Diaphorase Reaction of NADPH:Adrenodoxin Reductase by Adrenodoxin - I. A. Martsinkyavichene, N. K. Chenas, Yu. Yu. Kulis, and S. A. Usanov 1216 1624

Volume 55, Number 9, Part 2, September, 1990

Purification and Fluorescent Properties of Flavin-Containing Liver Polyamine Oxidase - V. K. Gasparyan and R. M. Nalbandyan 1223 1632

The Allosteric Nature of Substrate Inhibition of Fructose-1,6-bisphosphatase from Rabbit Skeletal Muscles - N. F. Belyaeva and I. R. Nikulin 1228 1638

Investigation of the Modification of Histidine Residues, SH, and ε-NH_2 Groups of Rat Sarcoma-45 Myosin by Specific Reagents - V. V. Senchuk, A. T. Pikulev, and I. N. Dashkevich 1235 1648

The Role of Exogenous Arachidonate in the Biosynthesis of 5-Lipoxygenase Metabolites of Arachidonic Acid by Human Polymorphonuclear Leukocytes after Stimulation by the Calcium Ionophore A23187 - G. F. Sud'ina, O. A. Barskii, and S. D. Varfolomeev 1241 1655

Hydrogenase Activity of Phycobilisomes of the Cyanobacterium *Nostoc muscorum* - O. D. Bekasova, A. I. Aristarkhov, and A. A. Krasnovskii 1245 1660

Purification and Properties of Methylamine Dehydrogenase of the Obligate Methylotroph *Methylobacillus flagellatum* KT - M. Yu. Kiryukhin, A. Yu. Chistoserdov, and Yu. D. Tsygankov 1251 1668

Purification and Some Physicochemical and Enzymatic Properties of Tissue Kallikrein from Human Urine - S. É. Rabinovich, L. S. Lobareva, and T. S. Paskhina 1257 1675

	Engl./Russ.	
Influence of Alkaline Light Chains of Myosin on the Interaction of Myosin Subfragment 1 with Actin in Solution and in a Ghost Muscle Fiber - D. I. Levitskii, Yu. S. Borovikov, O. P. Nikolaeva, N. L. Golitsyna, and B. F. Poglazov	1268	1690
The Enzymatic System of Deacylation-Reacylation of Phospholipids in Rat Liver Lysosome Membranes - T. B. Batikyan, K. G. Kragezyan, and Yu. V. Tadevosyan	1275	1700
The Molecular Mechanism of Substrate-Induced Transformation of Xanthine Oxidase Activities - E. P. Shelepina, V. G. Antonov, and L. A. Kozhemyakin	1280	1707
Investigation of the Interaction of 17β-Estradiol with Haptoglobin and its Complex with Hemoglobin - G. M. Isaeva, A. N. Smirnov, V. B. Rozen, and R. U. Beisembaeva	1285	1713
Influence of N-(6-Aminohexyl)-5-chloronaphthalene-1-sulfamide (W-7) and Its Analogs on the Activity of the Soluble Form of Guanylate Cyclase and the Aggregation of Human Platelets - I. S. Severina, Yu. Yu. Chirkov, N. N. Belushkina, I. A. Tyshchuk, S. V. Kulagin, and Yu. V. Khropov	1288	1717

Volume 55, Number 10, Part 1, October, 1990

Biochemistry and Enzymology of Cellulose Hydrolysis - A. A. Klesov	1295	1731
Naphthoquinone Metabolites of Fungi of the Genus *Fusarium* and *Verticillium*. Mechanism of the Phytotoxic Action - A. G. Medentsev, A. N. Maslov, and V. K. Akimenko	1319	1766
Subcellular Distribution of Certain Enzymes of the Adenosine System in the Hypothalamus and Hippocampus of the Rat Brain - V. Ya. Kononenko, N. M. Kosmina, and L. I. Pil'kevich	1324	1773
The Role of Aminopeptidases in Enkephalin Catabolism: Comparative Investigation of the Regional Distribution of Aminopeptidases and Enkephalinase A in the Rat Brain - N. A. Belyaev, E. F. Kolesanova, V. Yu. Baronets, E. R. Annaeva, V. F. Pozdnev, and L. F. Panchenko	1328	1778
Theophylline Metabolism by Rat Liver Microsomal Monooxygenases - V. A. Vavilin, A. Yu. Grishanova, L. F. Gulyaeva, V. M. Mishin, and V. V. Lyakhovich	1334	1786
Kinetic Scheme of the Action of 5-Lipoxygenase from Human Neutrophils - G. F. Sud'ina, G. M. Kobel'kov, O. A. Barskii, and S. D. Varfolomeev	1341	1795
An Endogenous Regulator of the Guanylate Cyclase Activity of Human Platelets - O. G. Busygina and I. S. Severina	1354	1812

Volume 55, Number 10, Part 2, October, 1990

Kinetic Investigations of the Mechanism of Removal of Substrate Inhibition of Lactate Dehydrogenase by Anions and pH - E. A. Saburova and L. O. Yagodina	1359	1819
Influence of Photosynthesis on the Amino Acid Composition of Callus Tissue of *Ruta graveolens* - L. F. Stakhov, L. N. Stakhova, and A. I. Lebedeva	1364	1826
Peculiarities of the Interaction of 2-Alkylmalonates with the Substrate-Binding Site of the Dicarboxylate Transporter of Rat Liver Mitochondria - K. F. Shol'ts, D. V. Mamaev, D. I. Bondarenko, and L. S. Lagutina	1368	1832
Mn-Dependent Peroxidase and Oxidase of *Panus tigrinus* 8/18: Purification and Properties - A. A. Leont'evskii, N. M. Myasoedova, O. V. Mal'tseva, N. G. Termkhitarova, V. I. Krupyanko, and L. A. Golovleva	1375	1841
Modification of the Functional Groups of the Streptokinase Molecule during Photooxidation - O. A. Kazyuchits, V. N. Nikandrov, G. S. Yankovskaya, and P. G. Rytik	1380	1847
Study of the Metabolism of Phosphorus-Containing Compounds in the Livers of Long-Tailed Susliks (*Citellus undulatus*) by the ^{31}P-NMR Method - V. I. Grishchenko, A. M. Belous, V. A. Moiseev, V. I. Zagnoiko, V. D. Zinchenko, A. N. Andrienko, V. V. Trachevskii, and E. A. Pashchenko	1391	1860

	Engl./Russ.	
Activated Oxygen as a Possible Factor in the Autoinhibition of Spore Germination of the Fungus *Pyricularia oryzae* - A. A. Aver'yanov and V. P. Lapikova	1397	1867
A High-Molecular-Weight Proteinase from Barley Malt - A. V. Zimacheva, E. V. Ievleva, and V. V. Mosolov	1403	1874
Functioning of Angiotensin-Converting Enzyme on Matrices - N. A. Lamzina, O. A. Kost, K. V. Piotukh, N. F. Kazanskaya, and N. I. Larionova	1409	1882
Influence of the Membrane Potential on Mg^{2+}, ATP-Dependent Transport of Ca^{2+} through Smooth-Muscle Sarcolemma - L. G. Babich, V. P. Fomin, and S. A. Kosterin	1415	1890
Influence of Remnants of Chylomicrons on the Cholesterol Metabolism in Cultured Rabbit Hepatocytes: Production of Very-Low-Density Lipoproteins and Bile Acids - D. K. Novikov, V. A. Kosykh, I. N. Trakht, E. A. Podrez, and V. S. Repin	1424	1902
Identification of Light Chain 1 of Myosin from Human Heart Ventricles on Two-Dimensional Electrophoretograms using Monoclonal Antibodies - L. I. Kovalev, A. Yu. Volgin, A. L. Konorova, M. N. Tsvetkova, E. V. Pulyaeva, L. A. Pevnitskii, and S. S. Shishkin	1431	1911

Volume 55, Number 11, Part 1, November, 1990

Growing Crystals of Soluble Proteins - I. P. Kuranova	1435	1923
Specific Limitations for Intracellular Diffusion of ADP in Cardiomyocytes - Yu. O. Belikova, A. V. Kuznetsov, and V. A. Saks	1450	1944
Investigation of the Specific Binding of 3′:5′-AMP by Rat Liver Mitochondria - V. I. Kulinskii, O. O. Baranova, and N. B. Zobova	1461	1958
Participation of the Chromatin Lipids of Rat Thymocytes in Responses to the Injurious Action of γ Radiation - T. P. Kulagina, I. K. Kolomiitseva, and Yu. S. Kaznacheev	1464	1962
An Alternative Mechanism of Biosynthesis of Folic Coenzyme - L. F. Stakhov, A. I. Lebedeva, and L. N. Stakhova	1469	1969
Detection of Lectins in Analytical Isoelectrofocusing of Wheat Proteins - Al. V. Konarev	1473	1975
Change in Protein Synthesis and Enzyme Activity in the Endocrine Organs of Birds During Ontogenesis - G. Khozhiakhmedov	1479	1984
The Role of Vitamin E in the Metabolism and Reception of Vitamin D - I. N. Sergeev, Yu. P. Arkhapchev, and V. B. Spirichev	1483	1989
Purification and Properties of the Hexon Antigen of Canine Adenovirus Serotype CAV-1 - L. V. Verkhovskaya, V. I. Ulasov, E. K. Kiseleva, S. N. Khil'ko, and T. I. Tikhonenko	1488	1996
Specific Binding of Iodothyronines to Apolipoprotein A-1 in High-Density Lipoprotein Particles Isolated from Human Blood Serum by Affinity Chromatography on Thyroxin-Sepharose - O. V. Sviridov, E. S. Pyshko, M. N. Ermolenko, and O. A. Strel'chenok	1493	2002

Volume 55, Number 11, Part 2, November, 1990

Catalytic Properties of Pea Leaf NADP-Isocitrate Dehydrogenase in the Reaction of Reductive Carboxylation - T. N. Popova, A. A. Zemlyanukhin, A. U. Igamberdiev, and E. N. Sadokhina	1499	2011
Isolation, Purification, and Certain Properties of Laccase from *Cerrena unicolor* - E. G. Bekker, S. D. Petrova, O. V. Ermolova, V. I. Élisashvili, and A. P. Sinitsyn	1506	2019
Mechanism of the Interaction of Tocopherol with Peroxide Radicals - L. F. Dmitriev and M. I. Verkhovskii	1511	2025

	Engl.	Russ.
Heterogeneity of the Protein Components of the Cell Wall of Group A *Streptococcus* - E. I. Blinnikova, L. O. Dynga, and N. I. Briko	1515	2031
Synthesis and Methylation on the Adenine Residues of "Heavy" Miniplasmids by Mitochondrial DNA in Wheat Sprout Coleoptile and Leaf: Influence of Phytohormones - N. I. Aleksandrushkina, I. B. Kudryashova, M. D. Kirnos, and B. F. Vanyushin	1521	2038
Regulation of the Aldose Reductase Activity of the Eye Lens. Nonhyperbolic Kinetics of the Oxidation of NADPH by Glucose - S. S. Vartanov, A. R. Pavlov, and A. I. Yaropolov	1526	2046
Regulation of the Catalytic Activity of the Monooxygenase Enzyme System Depending on the Structure of the Substrate and Phospholipid Composition of the Model Membrane - P. A. Kiselev, G. Garda, S. A. E. Finch, A. Stier, S. Yu. Khatyleva, and A. A. Akhrem	1535	2058
Polypeptide Composition and Formation of Enzyme-Protein Complexes in Mutants of *Chlamydomonas reinhardtii* - N. N. Lebedev, Tsung Ch'ing Tang, and V. G. Ladygin	1545	2072
Hydrolysis of *Staphylococcus aureus* 209P Cell Wall Peptidoglycan by Lysoamidase - A. I. Severin, V. Ya. Il'chenko, and I. S. Kulaev	1550	2078
The Lipogenic Role of Leucine in the Skeletal Muscles of Animals - S. I. Vovk and V. G. Yanovich	1559	2090
Biosynthesis of Ceruloplasmin in Various Rat Organs - L. V. Puchkova, V. V. Denezhkina, E. T. Zakharova, V. S. Gaitskhoki, and S. A. Neifakh	1563	2095
NEWS OF BIOCHEMISTRY		
Preparative Production of Human Galactosyltransferase. Comparison of Methods - A. D. Mikhailov and K. I. Zhordaniya	1569	2103

Volume 55, Number 12, Part 1, December, 1990

	Engl.	Russ.
Comparative Analysis of the Chromatographic, Kinetic, and Antigenic Properties of Type 2 Casein Kinases from Bovine Liver and the Phytopathogenic Fungus *Verticillium dahliae* - K. V. Kandrov, A. O. Vasil'ev, D. V. Kapkov, A. M. Fuéntes, and A. S. Stepanov	1573	2115
The Role of Peripheral Polypeptides in the Functioning of the Oxygen Evolving PS II Particles of Higher Plants - L. Maslenkova, I. M. Kurbanova, B. A. Kyurdov, S. B. Dadasheva, R. M. Gandzhieva, Yu. Zanev, and R. A. Gasanov	1578	2122
Functional Peculiarities of Cytochrome P-4501A1 and P-4501A2 in the Rodent Liver - T. G. Duzhak, V. M. Mishin, V. V. Lyakhovich, and I. B. Tsyrlov	1584	2129
Isolation, Purification, and Molecular Structure of the Vasoactive Component from Rabbit Skeletal Muscles - G. G. Petrovskii and É. P. Titovets	1591	2138
The Phenomenon of Acidification of the Medium by Methylotrophic Yeast Cells and Its Biochemical Nature - M. V. Gonchar, V. I. Titorenko, N. N. Gladarevskaya, and A. A. Sibirnyi	1598	2148
Isoelectrofocusing of 3-Hydroxy-3-methylglutaryl-CoA Reductase of the Postmitochondrial Fraction of the Rat Liver - É. B. Dizhe, L. E. Vasil'eva, T. A. Klimova, and O. A. Mal'tseva	1606	2159
Investigation of the Affinity Characteristics of Monoclonal Antibodies Using ELISA - N. V. Ermakov, A. G. Ishkov, E. V. Miroshnichenko, O. P. Plyushch, E. N. Remizova, P. G. Svershnikov, E. Yu. Chenchikova, and N. G. Cherchenko	1609	2163
Comparative Study of the Enzymes of Meta-Cleavage of the Aromatic Ring in Strains of the Bacterium *Pseudomonas* with Plasmid and Chromosomal Genetic Control of Biphenyl and m-Toluate Catabolism - S. A. Selifonov and I. I. Starovoitov	1616	2171

	Engl./Russ.	
Some Properties of the Ceruloplasmin Receptor Isolated from Human Erythrocyte Membranes - L. V. Puchkova, I. A. Verbina, V. V. Denezhkina, M. M. Shavlovskii, V. S. Gaitskhoki, and S. A. Neifakh	1624	2182
Preservation and Functioning of Yeast Mitochondria Injected into Developing Fish Embryos - N. B. Abramova, R. A. Zvyagil'skaya, I. I. Il'in, and A. A. Neifakh	1630	2190
Participation of Phospholipase A_2 in Uncoupling of Rat Liver Mitochondria Inducible by Lipid Peroxidation Products - V. G. Gogvadze, N. N. Bruetovetskii, and A. A. Zhukova	1634	2195
Chemical Modification of Immunoglobulins G by Rabbit N-Dansylaziridine and Investigation of the Properties of Modified Antibodies - I. A. Pikuleva, I. V. Turko, T. B. Adamovich, and V. L. Chashchin	1637	2200

Volume 55, Number 12, Part 2, December, 1990

Interrelationship of Desaturation of Fatty Acids of Phospholipids and the Synthesis of Carotenoids during Adaptation of *Neurospora crassa* Cells to Temperature and Light Influence - T. A. Lyudinkova, E. K. Chernysheva, A. A. Bezzubov, and M. S. Kritskii	1647	2211
Separation and Enzymological Investigation of *Aspergillus niger* R-3 Peroxisomes - S. P. Oganesyan, M. A. Davtyan, and Ya. Khandoga	1654	2221
An Intracellular Aminopeptidase from *Xanthomonas rubrilineans* which Hydrolyzers α-Amino Acids Esters and Cephalexin - I. N. Krest'yanova, N. N. Uvarov, G. N. Rudenskaya, V. V. Tsibanov, L. I. Vasil'eva, and V. M. Stepanov	1658	2226
Thyroid Hormone Regulation of the Interaction of Mitocondria with Low-Molecular-Weight Cytoplasmic Mediators that Induce Phosphate-Dependent Transport of K^+ and H^+ Ions through the Inner Mitochondrial Membrane - M. Kh. Gainutdinov, V. V. Konov, R. N. Ishmukhamedov, T. N. Zakharova, M. A. Khalilova, Z. A. Mamatova, M. I. Asrarov, and S. I. Mirmakhmudova	1669	2239
Change in the Passive Uptake of Ca^{2+} into Vesicles of the Sarcoplasmic Reticulum as a Result of Chemical Modification of the Surface Amino Groups - G. P. Dyadyusha, V. A. Tugai, V. P. Zimina, and A. N. Zakharchenko	1675	2247
Influence of pH of the Medium and Autocatalytic Phosphorylation on the Interaction of Phosphorylase Kinase with Calmodulin - A. E. Gol'dshtein, S. A. Shur, and I. A. Feoktistov	1681	2255
Identification of Haptoglobin as an Endogenous Inhibitor of Prostaglandin H Synthetase in the Cytosol of Cells of Sheep Vesicular Glands - R. U. Beisembaeva, A. T. Murzagalieva, L. M. Dzhumalieva, T. E. Shaikenov, and A. T. Mevkh	1686	2261
Isolation, Purification, and Properties of Cellobiohydrolase from *Trichoderma longibrachiatum* - O. V. Shpanchenko, O. V. Ermolova, and V. M. Chernoglazov	1692	2268
Substrate Specificity of α-Galactosidase - O. M. Zaprometova, I. V. Ulezlo, L. M. Likhosherstov, and M. D. Marynova	1702	2281
Some Properties of Highly Purified Polyphosphatase from the Cell Membrane of the Yeast *Saccharomyces carlsbergensis* - N. A. Andreeva and L. A. Okorokov	1706	2286
Thymidine Kinase from Sea Urchin Oocytes - L. L. Terent'ev, N. A. Terent'eva, L. A. Zakharova, and V. A. Rasskazov	1712	2293